

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 - 32. (canceled)

33. (previously presented) A system for validating multiple alternative execution plans for a single database query, comprising:

a search engine responsive to the query for constructing a data structure containing a plurality of groups each including a number of alternative operators, at least some of the operators having pointers to one or more different ones of the groups;

a ranking module for ranking the operators in the groups and for unranking them so as to construct a plurality of different execution plans for the query, wherein each execution plan is assigned a unique global rank, based on operator rank data, that identifies one respective execution plan from all other possible execution plans; and

a validation module for validating the execution plans from the ranking module.

34. (original) The system of claim 33 where the data structure is a table.

35. (original) The system of claim 33 further including a specification for specifying a number of different plans to be constructed.

36. (original) The system of claim 33 further including a directory containing locations of the groups and operators within the data structure containing the groups.

37. (canceled)

38. (previously presented) The system of claim 36 where the directory includes rank data for each group representing a number of alternative plans associated with that group.

39. (canceled)

40. (previously presented) A method for generating a plan for executing a database query, the method comprising the steps of:

arranging a plurality of execution plans into a plurality of groups, each group having at least one operator associated with at least one operator in another of the groups;

determining identification data for each operator related to other operators in the other of the groups; and

determining identification data for each execution plan based on the identification data for each operator, whereby the identification data for each execution plan uniquely identifies the respective execution plan from all other execution plans.

41. (previously presented) The method of claim 40, wherein the identification data for each execution plan represents a combination of operator choices within the groups used to obtain the respective execution plan.

42. (previously presented) The method of claim 40, wherein the rank data for the execution plans is represented by consecutive designations, whereby a valid execution plan can be generated for any designation selected at random, and that different designations will produce different execution plans.

43. (previously presented) A method for generating a plan for executing a database query, the method comprising the steps of:

- developing groups of operators representing alternative execution plans for a query;
- ranking the operators;
- assigning identifiers to the alternative execution plans based on the ranking of the operators;
- assembling an execution tree for a selected execution plan by unranking the selected execution plan, wherein unranking the selected execution plan involves selecting one of the operators from each group associated with the identifier of the selected execution plan.